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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/507,066	08/29/2005	Shen Ye	10467.57USWO	8906

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MERCHANT & GOULD PC
P.O. BOX 2903
MINNEAPOLIS, MN 55402-0903

EXAMINER

LEE, BENNY T

ART UNIT	PAPER NUMBER
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2817

DATE MAILED: 10/26/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/507,066	Applicant(s) YE, SHEN	
	Examiner Benny Lee	Art Unit 2817	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 29 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 12 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 5-8, 10, 15; 11; 13, 14 is/are rejected.
- 7) ☒ Claim(s) 3, 4 and 9 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 September 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date <u>8 September 2004</u> . | 6) <input type="checkbox"/> Other: _____ |

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The disclosure is objected to because of the following informalities: Page 2, lines 16, 17, 29, 30, note that updated status information for the cited co-pending applications (e.g. patent number, issue date, etc) should be provided, if available. Page 4, line 8, note that " Al_2O_3 " should correctly be $\text{--Al}_2\text{O}_3\text{--}$ for a proper characterization. Page 5, line 6, in the equation, note that the parameter " SI " needs to be strictly defined. Page 5, line 23 & page 6, line 26, note that "1 a" & "1 c" should be properly written as --1 a-- & --1 c-- , respectively. Page 6, line 6, in the heading, note that $\text{--of the Preferred Embodiments--}$ should be inserted after "Detail Description" as to be consistent with PTO guidelines; line 26, note that "1 b" should correctly be --1 b-- ; line 28, note that $\text{--(e.g. Resonator 1, Resonator 2)--}$ should be inserted after "resonator" for consistency with the labeling in fig. 1c; line 32, note that "figure 1" should properly be $\text{--figures 1a, 1b, 1c--}$ for consistency with these drawing figures. Page 7, line 2, note that " SI " should correctly be $\text{--}SI\text{--}$ for a proper characterization. Page 8, line 33, note that "resonator(s) SI " should correctly be $\text{--resonator } SI\text{--}$. Page 9, lines 30, 32, note that --in Fig. 6-- should be inserted after "63" & "64" for clarity of description. Appropriate correction is required.

The drawings are objected to because of the following: In Figs. 1a, 1b, 1c, 2, note that these drawing figures need to be labeled as --PRIOR ART-- as to be commensurate with the specification description thereof; In Figs. 4, 5a, note that reference label $\text{--}S_2\text{--}$ needs to be provided as to be commensurate with the specification description thereof.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing

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should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either “Replacement Sheet” or “New Sheet” pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claims 5, 13, 14, 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 5, note that “the coupling strip which lies adjacent the first resonator” lacks strict antecedent basis since the orientation of such a “coupling strip” has not yet been defined.

In claim 13, at “a” & “b”, note that “the primary coupling” and “the desired secondary coupling” respectively lack strict antecedent basis.

In claim 15, note that reference to a “mean plane” is vague and indefinite, even in view of the specification. Clarification is needed.

The following claims have been found to be objectionable for reasons set forth below:

In claim 1, note that “of the type used” should be rephrased as --for use in-- for an appropriate characterization.

In claim 10, note that “Al₂O₃” should correctly be --Al₂O₃-- for a proper characterization.

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In claim 11, at “b”, note that “at least first and second resonators” should be rephrased as –at least one first resonator and the second resonator-- for an appropriate characterization

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 6-8; 11 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Sagawa et al.

Sagawa et al (Fig. 8) discloses two planar resonators (5c, 5d) usable in a planar filter (8). Note that one of the two resonators (e.g. 5c) can be arbitrarily characterized as a “first” resonator while the other one of the two resonators (e.g. 5d) can be arbitrarily characterize as a “second” resonator. Note that the “first” resonator (e.g. 5c) includes “ends” thereof configured to be at the same side of the resonator (i.e. the ends of each parallel strip (51) of a fixed length is at the same side of the resonator), which are adjacent and proximate the “second” resonator (e.g. 5d) across a gap (53). Moreover, note that the ends of the “first” resonator define a “primary” (or first) coupling with the “second” resonator across gap (53) at the upper strip (51) and a “secondary” (or second) coupling with the “second” resonator across gap (53) at the lower strip (51) of fixed length. Furthermore, since the gap (53) is constant, the “first” distance of the “primary” coupling is the same as the “second” distance of the “secondary” coupling, which would have been within the scope of the claimed recitation (i.e. the claimed limitations do not explicitly require the first and second distances to be different). Additionally, since the respective coupling across gap (53) is defined as “electric field” type coupling, such a type of coupling corresponds to a “capacitive”

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coupling (i.e. the parallel strips (51) of each resonator define the conductive plates of a capacitor, while the gap (53) permits the electric field to couple across the gap between the conductive strips, thereby defining a “capacitive” coupling). Finally, it should be noted that the limitation “may be optimized by independently controlling ...” is not a positive recitation. Accordingly, Sagawa et al has been considered to have anticipated the “positive” limitations of these claims since the claimed invention may not require the “overall distance” to have been “optimized”

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sagawa et al in view of the Setsune et al patent abstract.

Sagawa et al discloses the claimed invention except for the resonators being a HTS material disposed on a substrate of a specific dielectric material.

The Setsune et al abstract discloses planar resonators (e.g. see Fig. 3) of the type corresponding to those in Sagawa et al, and in particular such resonators are made of a HTS material (i.e. HTS layer (3) of e.g. Bi-Sr-Ca-Cu-O) disposed on a MgO substrate (1).

Accordingly, it would have been obvious to have realized the planar resonator filter in Sagawa et al (Fig. 8) to have included a HTS material disposed on a MgO substrate, such as taught by Setsune et al. Such a modification would have been considered obvious since it would have imparted the advantageous benefit of low loss signal conductivity, taught by the HTS

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configuration in Setsune et al, to the like planar resonator filter of Sagawa et al, thereby suggesting the obviousness of such a modification.

Claims 3, 4, 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all the limitations of the base claim and any intervening claim.

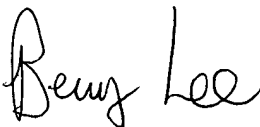
Claim 12 is allowable over the prior art of record since none of the prior art references fairly teach or suggest first and second resonators having a coupling strip associated with the secondary coupling therein.

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Aiga et al discloses resonators having ends thereof on the same side and coupling to another resonator.

Any inquiry concerning this communication should be directed to Benny Lee at telephone number 571 272 1764.

B. Lee


BENNY T. LEE
PRIMARY EXAMINER
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